

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-6. (Canceled)

7. (New) A method comprising:

supplying an initial substrate comprising an SiC support bearing a layer of SiO<sub>2</sub> whereon a thin layer of SiC is transferred, the thin layer of SiC being a 6H or 4H polytype SiC; and  
conducting an epitaxy of SiC on the thin layer of SiC at a temperature from 1450°C to 1550°C to obtain 6H or 4H polytype epitaxy on the transferred thin 6H or 4H polytype layer respectively.

8. (New) The method according to claim 7, wherein before the epitaxy step, an initial substrate preparation step is provided to improve the surface quality of the transferred thin SiC layer.

9. (New) The method according to claim 8, wherein the preparation step consists of subjecting the surface of the transferred thin SiC layer to an operation selected from polishing etching and hydrogen etching.

10. (New) The method according to claim 7, wherein several SiC layers are successively grown epitaxially on the thin SiC layer.

11. (New) A semiconductor device produced on an SiCOI composite substrate obtained by means of the manufacturing method according to claim 7.
12. (New) A method for manufacturing a SiCOI composite substrate, the method comprising:  
supplying an initial substrate comprising an Si support bearing a layer of SiO<sub>2</sub> whereon a thin layer of 3C polytype SiC is transferred; and  
conducting an epitaxy of SiC on the thin layer of SiC at a temperature from 1350°C to 1550°C to obtain 3C polytype epitaxy on the transferred thin 3C polytype layer.
13. (New) The method according to claim 12, wherein before the epitaxy step, an initial substrate preparation step is provided to improve the surface quality of the transferred thin SiC layer.
14. (New) The method according to claim 13, wherein the preparation step consists of subjecting the surface of the transferred thin SiC layer to an operation selected from polishing etching and hydrogen etching.
15. (New) The method according to claim 13, wherein several SiC layers are successively grown epitaxially on the thin SiC layer.
16. (New) Semiconductor device produced on an SiCOI composite substrate obtained by means of the manufacturing method according to claim 12.

17. (New) An SiCOI composite substrate manufacturing method comprising:  
supplying an initial substrate comprising an SiC support bearing a layer of SiO<sub>2</sub> whereon a thin layer of 3C polytype SiC is transferred;  
conducting an epitaxy of SiC on the thin layer of SiC at a temperature from 1350°C to 1550°C to obtain 3C polytype epitaxy on the transferred thin 3C polytype layer.
18. (New) The method according to claim 17, wherein before the epitaxy step, an initial substrate preparation step is provided to improve the surface quality of the transferred thin SiC layer.
- 19 (New) The method according to claim 18, wherein the preparation step consists of subjecting the surface of the transferred thin SiC layer to an operation selected from polishing etching and hydrogen etching.
20. (New) The method according to claim 17, wherein several SiC layers are successively grown epitaxially on the thin SiC layer.
21. (New) A semiconductor device produced on an SiCOI composite substrate obtained by means of the manufacturing method according to claim 17.
22. (New) A SiCOI composite substrate manufacturing method comprising:  
supplying an initial substrate comprising an Si support bearing a layer of SiO<sub>2</sub> whereon on a thin layer of 6H or 4H polytype SiC is transferred;

conducting an epitaxy of SiC on the thin layer of SiC at a temperature from 1350°C to 1550°C to obtain 6H or 4H polytype epitaxy on the transferred thin 6H or 4H polytype layer respectively.

23. (New) The method according to claim 22, wherein before the epitaxy step, an initial substrate preparation step is provided to improve the surface quality of the transferred thin SiC layer.

24. (New) The method according to claim 23, wherein the preparation step consists of subjecting the surface of the transferred thin SiC layer to an operation selected from polishing, etching and hydrogen etching.

25. (New) The method according to claim 22, wherein several SiC layers are successively grown epitaxially on the thin SiC layer.

26. (New) A semiconductor device produced on an SiCOI composite substrate obtained by means of the manufacturing method according to claim 22.